

AWARE TEAM ACTIVITIES IN GEORGIA

Mark Risse¹, David Radcliffe², Glen Harris³, Miguel Cabrera⁴, Larry Newton⁵ and John Worley⁶

AUTHORS: ¹Public Service Associate, Department of Biological and Agricultural Engineering; ²Professor, ³Assistant Professor, ⁴Associate Professor, Department of Crop and Soil Sciences; ⁵Associate Professor, Department of Animal and Dairy Sciences; and ⁶Assistant Professor, Department of Biological and Agricultural Engineering, University of Georgia, Athens, Georgia 30602.

REFERENCE: *Proceedings of the 1999 Georgia Water Resources Conference*, held March 30-31, 1999, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, University of Georgia, Athens, Georgia.

Abstract. This paper will discuss the development of the AWARE (Animal Waste Awareness in Research in Extension) team and some of its recent activities. It will cover the goals of the team and how it functions to obtain these goals. It will also discuss some of the tools the team uses including the webpage, listserve, and meetings and discuss how they are helping people throughout the state with information exchange on animal waste management issues. It will also discuss some of the AWARE teams past activities and plans for future activities.

INTRODUCTION

As one of the largest industries in Georgia, animal production has significant potential for environmental degradation. Animals produced in Georgia generate an estimated 22 million tons of manure each year containing more than 84,000 tons of nitrogen and 33,000 tons of phosphorus. Many of these nutrients, if not managed and used properly, can degrade both the surface and ground water within the State of Georgia. Animal operations also produce mortality and other by-products such as odor and ammonia emissions that can also impact the environment. To minimize the impact that animal production has on the environment, we need to insure that the animal producers are educated on the value of animal manures, proper and safe ways of storing and handling manures, and that they remain on the cutting edge of manure management technologies.

The concept for an AWARE Team was formulated in the Summer of 1995. Dr. Glen Harris, an Extension specialist from Tifton, and Dr. Miguel Cabrera, a researcher from Athens, were both attending an Animal Waste conference in Arkansas when they realized there was a need to somehow bring together everyone in Georgia who works on animal waste issues. When they returned to Georgia, the two of them began to organize the first ever "Manure Tour" across Georgia. Dr. Gale Buchanan, dean of the College of Agricultural and Environmental Sciences helped kick-off "Manure Tour I" as it is now known, that ran for two days

across the Piedmont and Coastal Plain in September 1995. The success of this tour led the group to plan another tour in December 1995 to look into swine and dairy waste issues. "Manure Tour II" involved another 2-day trek across the Piedmont and Coastal Plain and included eight stops at dairy and swine operations. During this second tour, the group decided to formalize itself and develop objectives and a plan of action to accomplish its goals.

OBJECTIVES

The concept for an AWARE Team was to use the commodity team approach, such as the successful Cotton and Peanut teams at the University of Georgia, to address animal waste management issues. The team serves as both a proactive and reactive source of unbiased animal waste information for the State of Georgia. Since its formulation, the AWARE team has developed a number of educational tools, conducted numerous events, and had a profound impact on Georgia Livestock Production Industry. It uses Extension methods that not only come from a wide variety of disciplines, but that also use many different of methods to communicate, inform, and teach those interested in Animal Waste Management issues.

The overall objective of the AWARE Team is: "To facilitate awareness of animal waste issues to research scientists, Extension personnel, industry representatives, and producers and to serve as a catalyst for providing economically and environmentally sound waste utilization solutions to Georgia's animal production industry." Some more specific objectives of the AWARE Team are to:

- 1) identify waste management problems and impediments to economically and environmentally sound waste utilization solutions.
- 2) prioritize research and Extension waste management needs.
- 3) promote statewide communication among all parties involved in Georgia's Animal production industry.
- 4) develop and provide educational tools and workshops to

Georgia's agricultural community.

- 5) provide a forum to demonstrate the pro-active nature of Georgia's agricultural industry.
- 6) provide for information exchange and updates on the newest technologies, research, and events that affect animal waste management.

Recently, with the development of the Environmental Protection Division's Animal Waste Stakeholder Group, the AWARE team has even realized the need to expand outside the College and include other University groups such as the Institute of Ecology, The Institute of Government, and the Institute of Community and Area Development. These groups are currently helping the AWARE team and local communities deal with conflict resolution and mediation when communities are divided on issues such as confined animal operations. The team is conducting training sessions and workshops at a local level using some of these non-traditional partners.

IMPLEMENTATION PLAN AND ACTIVITIES

The AWARE team does not have any formal structure or funding, yet, this has not impaired its ability to get things done. When it was initiated following one of the tours, it was decided that membership to the team would be open to anyone and that, at least initially, no formal leadership structure would be used. As the team has evolved, it has used semi-annual planning meetings to determine its agenda and various team members have taken on the responsibility of providing leadership for different activities. Funding has come through a wide variety of grant requests and the operating budgets of various team members. In addition, many agricultural organizations and the college administration have requested and funded various activities of the team.

The AWARE team has been involved in numerous programs and teaching activities. While these activities are often driven by current needs, they do all work toward a common goal: increased understanding and awareness for animal waste management activities in Georgia. Some specific activities to date have included:

- * Manure tour I: In September, 1995, fifteen research and Extension personnel toured the State from Athens to Camilla with eight stops at research projects and farms to discuss poultry litter use issues.
- * Manure Tour II set out from Athens on December 14, 1995 and concluded in Quitman the following day. Along the way, Eighteen individuals including several county agents stopped at nine locations to discuss swine and dairy waste issues.
- * Southeastern Sustainable Animal Waste Management Workshop held in Tifton, Georgia, February 11-13, 1997 was the AWARE team's first workshop and by all accounts, it

was an outstanding success. More than 250 people attended the workshop to listen to more than 50 speakers and view over 25 exhibits and posters.

- * North Carolina Educational Tour: On December 7-11, 1997 over 25 professionals from across Georgia set out to learn first-hand from North Carolina's experiences regarding the issue of Water Quality in relation to Agricultural Waste Management, particularly animal waste management. This tour included stops at the Nutrients on the Nueces River Conference, a visit to the National Animal and Poultry Waste Management Center, and several farms and research projects.

- * Report to Georgia House Agriculture Committee on regulation of Swine operations: Several members of the AWARE team were requested to give testimony on the need for and implementation of greater regulation of the swine industry.

- * Statewide Training on December 13, 1998 to more than 60 University personnel in the areas of understanding the technical issues surrounding confined animal operations and dealing with conflict resolution at the local level.

- * The AWARE team has developed a list of Extension specialists and researchers and their areas of expertise for the State legislature to use in policy formulation.

- * The AWARE team conducted a University wide meeting on regulating confined animal operations and developed a list of recommendations that was presented to the Georgia Department of Natural Resources.

- * The AWARE team participated in the EPD Stakeholders meeting to develop recommendations on Confined Animal Feeding Operation regulation.

OUTREACH METHODS

As with the program activities, the teaching methods that AWARE uses are very diverse. Not only is this caused by the diverse nature of the audience which ranges from agents and producers to legislators and research scientists, but also by the fact that the information must flow in two directions. The team has no defined agenda and the beauty of the team is that we all learn from each other. This enables us to pool our knowledge to overcome difficult issues. Some of the methods we use are:

Newsletter: The AWARE team has a quarterly newsletter that is distributed to a mailing list of all county agents and over 300 other individuals. These newsletters are also available via the internet and are downloaded by individuals around the world. Often extension agents and consultants either mailing these newsletters out to their clients or use pieces of them in local newsletters and programming. To be added to the mailing list please contact any team member.

Workshop/Field days: In addition to the large workshop that the team conducted in 1997, the team offers a variety of other training activities including courses at our annual Extension Winter School, field days on specific issues such as composting, equipment calibration, or new or innovative machinery, and participation in trade shows such as the Sunbelt Agricultural Expo.

Web page: All of the information that the group disseminates is available via the Internet at <http://www.bae.uga.edu/outreach/aware>. This information is then available for agents to use in county programing or for any other purpose. Our website averages over 100 visits per month.

List Serve: Our electronic list serve is probably one of the best uses of technology by the team. This list serve allows agents or producers to send questions to a large group of people in one mailing and usually results in questions being answered quicker than normal as well as producing quite a bit of interesting discussion. To subscribe to the listserve, e-mail majordomo@bae.uga.edu with the message of "subscribe aware" in the text.

Training Programs: The AWARE team is currently working with producer groups such as the Georgia Pork Producers and several poultry integrators to develop educational training and certification programs for their producers.

Annual Meetings: While the AWARE team annual meetings do not provide direct outreach to clients, they serve as a networking session and research update. At our last meeting, more than 20 individuals presented brief updates of the research and extension projects that they had underway. This not only keeps the entire group up to date and aware of other activities in Georgia but also serves as a brain storming session that leads to new research and extension proposal and projects.

RESULTS AND IMPACT

Each of the AWARE team's activities have resulted in numerous benefits. Besides the direct benefits resulting from the knowledge gained by each participant in these activities, other benefits include the contacts gained through networking at them and the establishment of the AWARE team that will function for years to come. Since the workshops and other animal waste activities in Georgia have been better organized and consolidated, the county agents and producers now know where to go to get information on manure management issues. While accurate records have not been kept, we do know that the AWARE team is producing positive results. Evidence of

this can be seen in the rate of growth in the number of people who want to be added to our newsletter, who are accessing our web page, and who are using our list serve. It can also be seen in the number of requests that the team has received from agricultural organizations and the University administration to coordinate animal waste related activities.

AWARE has established a program that enables us to rapidly educate the producers of the state and remain in the forefront of animal production nationally. The AWARE team has also recently become a member of the Animal and Poultry Waste Management Consortium and is active in a Fund for Rural America Grant that will establish a National Animal Manure and Waste Center. If groups like these are effective at securing research dollars and finding effective solutions, the importance of groups such as AWARE, that have a proven ability to rapidly transfer these solutions, will grow and similar groups will be established in other states or regions.

Most of the evaluation that the team has conducted on it's activities were conducted in conjunction with individual trainings or workshops. Feedback from a post conference survey at our largest workshop indicated that every one involved thought the workshop was good or excellent and all thought it would have a significant (41%) or some (59%) impact on their profession or farm. At our last training activity in December that targeted county extension agents, 85% of the attendees thought the workshop was informative and helpful and 61% stated that the AWARE team had been helpful to them.

Evaluations have also asked for suggestions of additional activities with which the AWARE team should be involved. The most popular requests were that the team have more field days or equipment demonstrations and that we provide more information on the legal and zoning issues involved in animal waste management. Another common suggestion was that AWARE interact more with governmental agencies, environmental groups, and integrators.

FUTURE DIRECTIONS

Both the past evaluations and other State and National developments will guide the AWARE team toward future activities. Nationally, the Draft Unified National Strategy on Confined Animal Feeding Operations (USDA and USEPA, 1998) and the development of a National Initiative by the USDA CSREES in Waste Management should provide additional programming activities and funding. In addition, several members of the team recently received an EPA Compliance Assistance Grant to develop a National Curriculum on Animal Waste Management. Under this agreement the team will work with research and extension

specialist from 13 other States to develop a training and certification program that will be pilot tested in Georgia in the coming years. Finally, our involvement with the National Animal Waste Management Center at North Carolina State University should lead to additional opportunities and increased coordination between the States.

At the State and local levels the AWARE team should be very active as well. Under the new draft for water quality rules in Georgia, some sort of certification program will need to be developed for CAFO's that require a permit. Hopefully, the AWARE team will participate in the development and implementation of this program as well as in the development of extension bulletins outlining the new requirements in the near future. We also hope to offer technical training courses in nutrient management planning and policy and zoning issues in the near future. Finally, plans are being developed with the Georgia Association of County Commissioners to assist them with training activities in the area of dealing with Confined Animal Feeding Operations.

CONCLUSIONS

AWARE is using a team approach to addressing critical issues in the area of animal waste management. This approach combines several outreach and teaching methods and utilizes professionals from a wide variety of backgrounds and disciplines to accomplish it's goal of facilitating an awareness of animal waste issues and solutions to a diverse clientele and serving as a catalyst for providing economically and environmentally sound waste utilization solutions to Georgia's animal production industry. The team is very informal, lacks structure and funding, and has no formal leadership structure, yet it has been successful. Much of this success is due to the diverse nature of the group, it's ability to include people from a variety of agencies and background, and the need for this type of programming.

ACKNOWLEDGMENTS

The authors are grateful to everyone that has worked with the AWARE team. Each member should be recognized as a co-author.

LITERATURE CITED

- USDA and EPA. 1998. Strategic planning paper. Draft unified national strategy for animal feeding operations. US Government Printing Office. Washington, DC.